

### **AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows:

#### **Listing of Claims:**

Claim 1 (Currently Amended): A packet transmission system comprising:

a plurality of wireless base stations; and

one or more terminal devices belonging to one of the wireless base stations;

wherein each of the wireless base stations has

a location table to record an address of each of said plurality of wireless base stations that structure a network, and for each of said plurality of wireless base stations that are recorded, in association with an address ~~address~~ of the terminal ~~device~~ devices that are currently existing under ~~said each~~ the respective wireless base station,

a short packet route control table and a long packet route control table describing that ~~indicate for~~ each of the other wireless base stations that structure the network which wireless ~~base stations are along a first route for a short packet and along a second route for a long~~ packet as a root bridge or a destination bridge of a transmission path in the network in ~~association with a next hop to which the received packet is to be forwarded, the next hop~~ being determined in accordance with a wireless base station to which a source terminal ~~device or a destination terminal device currently belongs, and wherein~~

each of the wireless base stations is configured to exchange the information in the location table with the other wireless base stations to update the location table; and

each of the wireless base stations is configured to, upon receiving a packet, identify a wireless base station to which the source terminal device or the destination terminal device currently belongs according to the location table, based on a source address of the source terminal device or a destination address of the destination terminal device, respectively, included in the received packet, and to determine whether the packet is a short packet or a

long packet to find a next hop based on either the short packet route control table or the long packet route control table, respectively, to find the next hop according to the route control table, and transmit the packet to the next hop.

Claims 2-5 (Cancelled).

Claim 6 (Currently Amended): A wireless base station constituting, together with other wireless base stations, a packet transmission system using a wireless packet network, comprising:

a location table to record an address of each of the wireless base stations in said packet transmission system, and for each of said plurality of wireless base stations that are recorded, addresses in association with an address of each of terminal devices that are currently participating in the network and existing under a corresponding respective one of the wireless base stations;

a short packet route control table and a long packet route control table describing that indicate for each of the other wireless base stations that structure the network which wireless base station are long a first route for a short packet and along a second route for a long packet as a root bridge or a destination bridge of a transmission path in the network in association with a next hop to which a packet is to be forwarded, the next hop being determined in accordance with a wireless base station to which a source terminal device or a destination terminal device belongs;

a route determination unit configured to identify a wireless base station to which the source terminal device or the destination terminal device currently belongs according to the location table, based on a source address of the source terminal device or a destination address of the destination terminal device included in a received packet, and to determine

whether the packet is a short packet or a long packet to find a next hop based on either the short packet route control table or the long packet route control table, respectively, and find the next hop according to the route control table; and

a packet transmission unit configured to transmit the packet to the next hop according to the determination result.

Claim 7 (Cancelled).

Claim 8 (Previously Presented): The wireless base station of claim 6, wherein the packet transmission unit transmits a message packet reporting participation of a new terminal device when the new terminal device belongs to the wireless base station.

Claim 9 (Original): The wireless base station of claim 6, wherein when the receiving unit receives a message packet reporting a new terminal device having belonged to one of the other wireless base stations, the route determination unit updates the location table.

Claim 10 (Currently Amended): The wireless base station of claim 6, wherein when the receiving unit receives a packet from a source terminal device belonging to this wireless base station, the packet transmission unit writes an address of a destination side wireless base station to which a destination terminal device currently belongs in the packet, and then transmits the packet to the next hop according to either the short packet route control table or the long packet route control table.

Claims 11-28 (Cancelled).

Claim 29 (Currently Amended): A packet transmission system comprising a plurality of wireless base stations and one or more terminal devices belonging to one of the wireless base stations,

wherein each of the wireless base stations includes:

a location table recording an address of each of said plurality wireless base stations that structure a network, and for each of said plurality of wireless base stations that are recorded, addresses describing each of the terminal devices that are currently associated with a corresponding respective wireless base station to which the terminal device currently belongs,

a short packet route control table and a long packet route control table describing that indicates for each of the other wireless base stations that structure in the network in association with which wireless base stations are along a first route for a short packet and along a second route for a long packet a next hop to which the received packet is to be forwarded, the next hop being determined in accordance with a wireless base station to which a source terminal device or a destination terminal device currently belongs,

a packet creating unit configured, if said one of the wireless base stations is a wireless base station that first received a packet from a terminal device, to add address information of a wireless base station, to which the source terminal device or the destination terminal device of the received packet currently belongs, to the received packet with reference to the location table,

a route determination unit configured, upon receiving a packet from another wireless base station, to determine a next hop wireless base station to which the received packet is to be forwarded, based upon the address information of the wireless base station to which the source terminal device or the destination terminal device currently belongs, the address information included in the packet, and based upon either the short packet route control table

or the long packet route control table, respectively, by first determining whether the packet is a short packet or a long packet~~with reference to the route control table,~~

a packet transmission unit configured to transmit the packet to the next hop wireless base station determined by the route determination unit, and

a location table updating unit configured to exchange the information in the location table with the other wireless base stations and update the location table of this wireless base station.

Claim 30 (Previously Presented): The packet transmission system of claim 29,  
wherein the packet transmission unit of a corresponding wireless base station is further configured to transmit a message packet reporting participation of a new terminal device when the new terminal device belongs to the corresponding wireless base station; and  
wherein the location table updating unit is further configured to update the location table when the message packet is received from another wireless base station.

Claim 31 (Previously Presented): The packet transmission system of claim 29,  
wherein the packet creating unit is configured, if said one of the wireless base stations is a wireless base station that first receives a packet from a terminal device, to add ID information of a transmission route for this packet to the receive packet, and  
wherein upon receiving a packet from another wireless base station, the route determination unit determines the next hop wireless base station from the ID information of the transmission route included in the received packet, with reference to the route control table.

Claim 32 (Currently Amended): A wireless base station used in a wireless packet

transmission system, comprising:

a location table to record an address of each of said plurality wireless base stations that structure a network, and for each of said plurality of wireless base stations that are recorded, addresses describing each of the terminal devices that are currently associated with a corresponding respective wireless base station to which the terminal device currently belongs in said wireless packet transmission system,

a short packet route control table and a long packet route control table describing that indicate for each of the other wireless base stations that structure a network in the wireless packet transmission system which wireless base station are along a first route for a short packet and along a second route for a long packet in association with a next hop to which the received packet is to be forwarded, the next hop being determined in accordance with a wireless base station to which a source terminal device or a destination terminal device currently belongs,

a packet creating unit configured, if this wireless base station is one that first received a packet from a terminal device, to add address information of a wireless base station, to which the source terminal device or the destination terminal device of the received packet currently belongs, to the received packet with reference to the location table,

a route determination unit configured, upon receiving a packet from another wireless base station, to determine a next hop wireless base station to which the received packet is to be forwarded, based upon the address information of the wireless base station to which the source terminal device or the destination terminal device currently belongs, the address information included in the packet, and based upon either the short packet route control table or the long packet route control table, respectively, by first determining whether the packet is a short packet or a long packet, with reference to the route control table,

a packet transmission unit configured to transmit the packet to the next hop wireless

base station determined by the route determination unit, and

a location table updating unit configured to exchange the information in the location table with the other wireless base stations and update the location table of this wireless base station.

Claim 33 (Previously Presented): The wireless base station of claim 32,  
wherein the packet transmission unit configured to transmit a message packet reporting participation of a new terminal device when the new terminal device belongs to this wireless base station; and

wherein the location table updating unit configured to update the location table when the message packet is received from another wireless base station.

Claim 34 (Cancelled).

Claim 35 (New): The packet transmission system according to claim 1, wherein at least one of the wireless base stations includes:

a cost estimation unit configured to send a route search packet to adjacent wireless base stations that configure the network so that the adjacent wireless base station add up route costs to gather information on the first route and the second route for the short packet route control table and the long packet route control table, respectively.

Claim 36 (New): The wireless base station according to claim 6, further comprising:  
a cost estimation unit configured to send a route search packet to adjacent wireless base stations that configure the network so that the adjacent wireless base station add up route costs to gather information on the first route and the second route for the short packet route

control table and the long packet route control table, respectively.

Claim 37 (New): The packet transmission system according to claim 29, wherein at least one of the wireless base stations includes:

a cost estimation unit configured to send a route search packet to adjacent wireless base stations that configure the network so that the adjacent wireless base station add up route costs to gather information on the first route and the second route for the short packet route control table and the long packet route control table, respectively.

Claim 38 (New): The wireless base station according to claim 32, further comprising:

a cost estimation unit configured to send a route search packet to adjacent wireless base stations that configure the network so that the adjacent wireless base station add up route costs to gather information on the first route and the second route for the short packet route control table and the long packet route control table, respectively.